

ninety members. The proceedings are reported in the local papers, and judging from the programme sent us the club means to go in for hard and earnest, and we hope fruitful, field-work.

It gives us much pleasure to see from a recent number of the *Dunstable Borough Gazette* that that paper devotes a fair amount of space to science, under the title of "Our Science Column." The number before us, June 17, contains a good popular article on the value of scientific knowledge, some meteorological data, and an original communication on the botany of Dunstable, being the continuation of a list of plants of the district, with their common and scientific names. We hope the editor will continue his science column, and make it a means of enlightening his readers, and that the number of provincial papers which have a "Science Column" may go on rapidly increasing.

THE *Gardeners' Chronicle* learns that a committee has been formed, and funds are being collected, for the much needed restoration of Selborne Church as a memorial to Gilbert White. It is also proposed to erect a Cross to his memory on the "Plestor." It is hoped that a sufficient sum will be raised, beyond what will be required for these objects, to found an exhibition to one of the colleges at Oxford, with which he was connected, to be called the "Gilbert White" Exhibition. It is calculated that at least 5,000*l.* will be required. The committee includes the names of the Right Hon. Lord Selborne, the President and Fellows of Magdalen College, Oxon; Prof. Bell, F.R.S., &c.; the Rev. F. Parsons, Vicar of Selborne, and others.

At a special meeting of the Anthropological Institute, to be held at Bethnal Green Museum, on July 1, Col. Lane Fox will give an Address on the principles of classification in his anthropological collection.

DR. LEA has added another volume to his large work on the Unionidae, illustrated by twenty-two lithographic plates.

A PROPOSAL has been made in the *American Chemist* that a centenary meeting should be held on August 1 to commemorate the discovery of oxygen by Priestley on August 1, 1774. The *American Journal of Science and Arts* points out that this would afford an opportunity to discuss interesting chemical topics and to review the progress made during the century.

ON Wednesday the 17th the President of the Geological Society held an inaugural reception of the Fellows in their new apartments at Burlington House, to which many ladies were also invited. Although the meeting-room has been in use for a few weeks, and the removal of the library from Somerset House has been completed, the removal of the museum has but just commenced, and as the collections are so extensive it will occupy many weeks.

THE Statistical Society will hold its Fortieth Anniversary Meeting on Tuesday, June 30, at 3.30 P.M.

A PROJECT has been set on foot to provide Bridlington Quay with a marine aquarium. It is estimated the work will cost about 5,000*l.*, towards which several gentlemen in the locality have promised to subscribe. The affair will probably take the shape of a limited liability company.

THE additions to the Zoological Society's Gardens during the last week include two Huanacos (*Lama huanaco*) and a Patagonian Cavy (*Dolichotis patagonica*) from Patagonia, presented by Mr. W. G. Parry; a Common Raccoon (*Procyon lotor*) from North America, presented by Mr. T. Taylor; a Bonnet Monkey (*Macacus radiatus*) from India, presented by Mr. Wood; two Blue-cheeked Barbets (*Magalema asiatica*) and two White Cranes (*Grus leucogeranus*) from India; a Honey Buzzard (*Pernis apivorus*), European, purchased; a Malay Tapir (*Tapirus indica*) from Malacca, deposited.

CONFERENCE FOR MARITIME METEOROLOGY

THE Sub-committee for Maritime Meteorology appointed by the Permanent Committee of the Vienna Congress have determined to hold a private conference on the subject in London, to commence on Aug. 31. The meetings will be held, by permission of the meteorological committee, at the Meteorological Office, 116, Victoria Street, London, S.W. The invitations are to be issued this week, and the following is the Programme of Questions to be discussed. I may say that I have already received replies to the circular respecting the Brussels Conference from all the countries to which it was addressed.

ROBERT H. SCOTT,
Secretary to the Sub-Committee

A general wish has of late been expressed that the measures for the prosecution of Maritime Meteorology proposed at the International Conference at Brussels in 1853 should be reconsidered, now that the experience of more than twenty years of the operation of these measures has enabled meteorologists to form opinions as to their utility.

At the Meteorological Conference at Leipsig in 1872, and again at the International Congress at Vienna in 1873, preliminary discussions took place on the subject of the more successful prosecution of Ocean Meteorology. Certain resolutions were adopted at Leipsig and confirmed at Vienna, and accordingly it seems proper to embody them in the present programme. They run as follows:—

"1. Thorough uniformity in methods and instruments should be aimed at in the same measure as for observations on shore. This will be most satisfactorily obtained by the chiefs of the central institutes—the establishment of which in all countries in which they do not already exist, and in which the maritime interests demand them, must be declared as absolutely necessary—entering into relations with each other and agreeing on the separate details, the construction of the instruments, the hours of observation, the journal, &c.

"2. Unity of measures and scales is desirable, and to this end the introduction of millimetres for the barometer and the centigrade scale for the thermometer should be aimed at. While, however, the comparison of standard instruments of the individual central stations must be insisted on, the uniformity of scales is at present only declared as desirable.

"3. The Committee would urge the importance of the co-operation of the navies, inasmuch as by their assistance, and by the opportunities afforded thereby of completeness in certain observations, the determination of factors and constants is rendered possible, which can be used with advantage for the reduction of certain results derived from the general system of observations.

"4. With reference to the utilisation of the results, the Committee would urge similarly the importance of uniformity in the methods employed. In close relation therewith was the carrying out of the division of labour of the central stations of the individual states. This principle must be recognised as of the greatest importance for the further development of Marine Meteorology. The repetition of work over definite regions, with reference to the area to be investigated, must be declared as indefensible in the interests of this development."

It was further resolved—"That the convening of a Maritime Meteorological Conference is desirable."

While accepting the above resolutions as a general expression of the principles which should form the basis of an agreement as to future operations in the field of Ocean Meteorology, the Sub-Committee to whom the negotiations preparatory to the assembling of a Conference have been entrusted, consider that it is advisable to enter more minutely into the details, and have accordingly agreed on the following series of questions:—

In the case of a nation which sent any representative to the Brussels Conference in 1853, a circular should be addressed to the chief of the Office for Maritime Meteorology, if such exist, or to the chief of the meteorological organisation of the country, requesting him to state:—

1. To what extent the resolutions adopted at Brussels have been carried out in this country?

2. What have been the grounds for departure from them, if such departure has taken place? and to send his reply to the Secretary to the Sub-Committee, Mr. Robert H. Scott, 116, Victoria Street, London, S.W.,

before June 1 next, in order to allow ample time to draw up a report on the replies for consideration at the Conference.

It seems advisable that, as above stated, the action taken at Vienna should be carefully reconsidered under several heads which will now be recapitulated.

I. *Observations.*—In respect of this subject it will be most convenient to take the "Abstract Log" of the Brussels Conference, and to discuss the several subjects of observation therein in the order of sequence of the columns.

Cols. 1 and 6. Date and position of the observations.—Is it your opinion that a fresh column should be added, headed "Course and Distance by the Log in every Watch of four hours"?

,, 7 and 8. Currents.

,, 9. Magnetic variation.—Is it desirable to give an additional column for the "Direction of Ship's Head"?

,, 10 and 11. Wind, direction and force.—Is it possible to employ an anemometer at sea so as to give trustworthy results? Can the use of the Beaufort Scale be made universal?

,, 12 and 13. Barometer.—To what degree of minuteness is it necessary to observe this instrument?

,, 14 and 15. Thermometer—Dry bulb and wet bulb.—Should these observations be required from all ships?

,, 16. Forms and direction of clouds.—Is this column sufficient, or should any notice be taken of more than one stratum of clouds?

,, 17. Proportion of sky clear.—Is it not advisable to substitute for this heading "Proportion of sky clouded"?

,, 18. Hours of rain, fog, snow, &c.—Is it desirable to retain this heading, or to substitute for it and No. 23 a column headed—"Weather by Beaufort Notation"?

,, 19. State of the sea.—Should this be given according to a numerical scale?

,, 20. Temperature of sea surface.

,, 21. Specific gravity of sea surface.

,, 22. Temperature at depths.—Is it desirable to retain these two last columns, or can the observations when taken be inserted in the column for "Remarks"?

,, 23. Weather. See No. 18.

,, 24. Remarks.

II. *Instruments.*—What patterns of instruments should be employed for any observations which may require them? Is there a reasonable possibility of introducing the metric and centigrade systems for general use at sea?

III. *Instructions.*—Is it possible to devise a general form of instructions to ensure uniformity in regard of methods of observation and registration?

IV. *Observers.*—What control should be exercised over the observers as to their instruments and registers? Is it desirable that all instruments employed should be the property of the central establishment, and lent to the observers?

V. *Co-operation of the Royal Navy.*—To what extent can ships of war assist in forwarding the ends of meteorological inquiry?

VI. *Discussion.*—Can general suggestions be thrown out as to the most profitable mode of discussion of the observations?

VII. *Subjects of Inquiry.*—To what extent can a division of labour as regards subjects of inquiry be carried out in a spirit of fairness to the collecting and discussing establishments respectively?

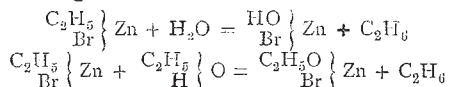
VIII. *Sailing Directions.*—In how far are purely practical investigations, such as the preparation of sailing directions, admirable for a scientific institution?

Any gentleman into whose hands this programme may come, and who is himself not likely to attend the Conference, is requested to forward any remarks he may wish to make on any of the subjects mentioned herein to Mr. Scott, at the above address, before July 1, 1874.

SCIENTIFIC SERIALS

THE Journal of the Chemical Society for May contains the following papers communicated to the Society:—On the action of bromine on alizarin, by W. H. Perkin. Alizarin heated in a

sealed tube with a solution of bromine in carbon disulphide yields monobromalizarin, $C_{14}H_7BrO_4$. This latter substance heated with acetic anhydride gives diacetobromalizarin, $C_{14}H_5Br(C_2H_3O)_2O_4$, and with nitric acid a mixture of phthalic and oxalic acids, while free bromine is given off. Specimens of cotton prints showing the difference in the shade of colour produced by alizarin and bromalizarin when used as dyeing materials accompany the paper.—Note on the action of trichloroacetyl chloride upon urea, by Raphael Meldola and Donato Tommasi. The authors have obtained trichloroacetyl urea $CO \{ NH(C_2Cl_3O)$.—Researches on the action of the copper-zinc couple on organic bodies. Part V. On the bromides of the olefines; and Part VI. On ethyl bromide, by Dr. J. H. Gladstone and A. Tribe. The couple acts upon dry ethylene bromide, producing ethylene by double decomposition; in presence of alcohol the decomposition is explosive. The action of the couple is the same either in presence of alcohol or water, and the fact that these substances facilitate the action is explained by the authors by the solvent action of these liquids on the film of zinc bromide formed on the surface of the couple. Propylene and amylene bromides are decomposed in a similar manner, yielding the corresponding olefines. With regard to the action of the couple on ethyl bromide the authors are of opinion that ethylo-bromide of zinc $C_2H_5 \{ Br \} Zn$ is always formed, and this on further heating produces zinc ethyl and zinc bromide or two semi-molecules of ethyl may decompose with the formation of ethane and ethylene. In presence of water or alcohol ethane is always produced according to the reactions:—



—The agglomeration of finely-divided metals by hydrogen, by Alfred Tribe. Copper, palladium, and platinum in a finely-divided state agglomerate when hydrogenised. By way of hypothesis the author suggests that the minute particles of the metals are surrounded by layers of liquid hydrogen which coalesce.—The last paper is by Andrew Fuller Hargreaves. On the spontaneous combustibility of charcoal. The maximum amount of oxygen is absorbed from the atmosphere within three days after carbonisation, so that from that time charcoal may be used for gunpowder without danger, but up to that period spontaneous combustion is liable to occur. About three-fourths of the journal is devoted to foreign abstracts.

Transactions of the Manchester Geological Society, vol. xiii. Part IV.—The papers in this part are the following:—On coal-cutting machinery, by Mr. W. H. J. Traice; Additional notes on the millstone grit of the parish of Halifax, by Mr. James Spencer; On Permian and Trias, by Mr. E. W. Binney, F.R.S.; On Pleistocene mammalia found near Castleton, Derbyshire, by Mr. J. Plant, F.G.S.

Proceedings of the Geologists' Association, vol. iii. No. 5.—Besides an account of some of the excursions made by the Association during 1873 the number contains the following papers, abstracts of which have been given in our reports of the Society's proceedings:—On some fossils from the Margate chalk, by J. W. Wetherell, with illustrations; On the valley of the Vézère, Périgord, its limestones, caves, and Prehistoric remains, by Prof. T. Rupert Jones, F.R.S.; On ammonite zones in the Isle of Thanet, by F. A. Bedwell. The last-mentioned occupies a large part of the number, and is illustrated.

Bulletin of the Essex (Salem, U.S.) Institute, vol. iv., 1872.—The principal papers in the *Bulletin* of this very efficient Institute for 1872 are a communication from Mr. S. A. Nelson On the Meteorology of Mount Washington, the main purpose of which is to show the advantages for meteorological purposes mountain-stations offer over those less elevated; and a "Catalogue of the Mammals of Florida, with notes on their Habits, Distribution," &c., by C. J. Maynard.—The *Bulletin* for 1873 contains more papers of scientific interest than that of the previous year.—The first paper is a short one, by Dr. A. S. Packard, On the glacial phenomena of north-east America compared with those of Europe.—There is a short but interesting statement by Mr. J. H. Emerton of the results of his observations on worms of the genus *Nais*.—Mr. S. M. Allen contributes a paper On ancient and modern theories of light, heat, and colour.—Mr. H. Herrick contributes a Partial Catalogue, of con-